

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION

SOUTHWESTERN BELL TELEPHONE,	§	
L.P.,	§	
	§	
Plaintiff,	§	
	§	
V.	§	CIVIL ACTION NO. 3: 04-CV-0669-B
	§	Consolidated Lead Case
ARTHUR COLLINS, INC.,	§	
	§	
Defendant.	§	

MEMORANDUM OPINION AND ORDER
ON CLAIM CONSTRUCTION

This is a patent case involving telephone switching systems used in the digital transmission of communications over high-speed fiberoptic lines. The patents at issue, U.S. Patent Nos. 4,797,589 (the '589 patent) and 4,701,907 (the '907 patent), are owned by Defendant Arthur Collins, Inc. ("Collins"). Plaintiffs Southwestern Bell Telephone LP, SBC Communications, Inc. (collectively "SBC"), Nortel Networks, Inc. ("Nortel"), and Fujitsu Network Communications, Inc. ("Fujitsu"), (collectively referred to as "Plaintiffs"), filed this suit seeking declaratory relief of non-infringement and/or invalidity on March 31, 2004. Presently before the Court is the task of claim construction with respect to several disputed claim terms contained in the two patents. A *Markman*¹ hearing was held on June 30, 2005, and the parties have fully briefed the claim construction and related issues.

Before turning to the claim terms at issue, the Court must first address Plaintiffs' collateral

¹ *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 391 (1996).

estoppel and *stare decisis* arguments. Plaintiffs claim that this Court is precluded from construing certain key claim terms under the doctrines of collateral estoppel and *stare decisis* because those terms were previously construed by a federal district court in the Eastern District of Virginia (“the Virginia court”), and thereafter by the Federal Circuit in a very similar case (referred to in this opinion as “*Collins I*”).

I. Effect of Prior Proceedings

In *Collins I*, the Virginia court entered claim construction rulings on several claim terms, including: “TST switch;” “connected” and “connectable;” “bypass;” “control store;” “means for measuring;” “unified structure²;” and “direction of the timing adjustment interval.” On appeal, the Federal Circuit addressed the Virginia court’s construction of the term “TST switch” and found a slightly expanded construction of the term more in line with the intrinsic record and prior art. The Circuit Court ultimately affirmed the Virginia court’s finding of non-infringement but declined to address the lower court’s construction of the other claim terms. The parties do not dispute the foregoing procedural history but strongly disagree on the preclusive effect of the two courts’ holdings on this Court.

A. Collateral Estoppel

1. Factual and Procedural Background

In 1998, Collins filed *Collins I*, a patent infringement suit involving the ‘589 and ‘907 patents in the Virginia Court against Plaintiff Nortel. See *Arthur A. Collins, Inc. v. Northern Telecom, Ltd.*,

² The term “unified structure” is not a claim term, rather it is a term found in the specifications of the ‘589 and ‘907 patents. For reasons that will be addressed later in this opinion, this meaning of this term bears significance to a critical issue in this case. Hence, it was construed by the Virginia court and will be addressed by this Court.

216 F.3d 1042, 1043 (Fed. Cir. 2000). The case centered on Collins' allegations that certain Nortel products, alone and in conjunction with other manufacturers' products, infringed the '589 and '907 patents. *Id.* *Collins I* involved products and infringement allegations identical to some of those contained in this case. Moreover, several of the key claim terms in dispute before this Court were also at the core of *Collins I*. As mentioned, the Virginia court entered claim construction rulings on several of these claim terms, including the following:

- "TST switch;"
- "connected" and "connectable;"
- "bypass;"
- "control store;"
- "means for measuring;"
- "unified structure;" and
- "direction of the timing adjustment interval."

See generally, Collins I.

Upon appeal, as recited above, the Federal Circuit affirmed the Virginia court's finding of non-infringement but declined to review the lower court's construction of any other claim terms with the exception of "TST switch." *See generally, Collins*, 216 F.3d 1042 (Fed. Cir. 2000). The parties agree that the Federal Circuit's decision as to the construction of "TST switch" is binding on this Court but part company over the effect of the Circuit Court's decision on the Virginia court's other claim construction rulings. Plaintiffs argue that this court is obliged to follow the rulings of the Virginia court under the doctrines of collateral estoppel and *stare decisis*.

2. Legal Standard

The doctrine of collateral estoppel bars parties from contesting issues litigated and decided in a prior action. *See, e.g., TM Patents, L.P. v. IBM Corp.*, 72 F. Supp. 2d 370, 375 (S.D.N.Y. 1999) (citing *Blonder-Tongue Lab. Inc.*, 402 U.S. 313, 329 (1971)). Adhering to this principle in

patent cases, the Federal Circuit has held that “where a determination of the scope of patent claims was made in a prior case, and the determination was *essential* to the judgement there on the issue of infringement, there is collateral estoppel in a later case on the scope of such claims.” *Pfaff v. Wells Elec., Inc.*, 5 F.3d 514, 518 (Fed. Cir. 1993) (citation omitted). Thus, if the appellate court affirms the district court’s infringement decision on one ground and passes over others, collateral estoppel does not apply to the grounds omitted from the appellate decision. *Masco Corp. v. United States*, 303 F.3d 1316, 1330 (Fed. Cir. 2002) (quoting 18 Charles Alan Wright, Arthur R. Miller & Edward H. Cooper, FEDERAL PRACTICE AND PROCEDURE § 4421 at 570 (2d ed. 2002)).

3. Analysis

(a) Construction of Claim Terms in *Collins I*

In this case, although the Virginia court entered claim construction rulings with respect to several terms in dispute, the Federal Circuit saw fit to address only the term “TST switch.” The Circuit Court explained its decision to pass over the other claim construction rulings as follows:

In light of our decision with respect to the two issues discussed above, [construction of the term “TST switch” and non-infringement under direct and induced theories] it is not necessary for us to address Collins's assertions of error with respect to other claim construction issues, and we decline to do so. While those claim construction issues might have been applicable to a doctrine of equivalents argument, Collins has not raised any doctrine of equivalents argument before us. Simply challenging the district court’s claim construction does not suffice to present on appeal the issue of summary judgment regarding infringement under the doctrine of equivalents.

Collins, 216 F.3d at 1049.

Given that the Federal Circuit expressly passed over all but the one of the lower court’s claim construction rulings, it stands to reason that collateral estoppel would not apply to those claim terms omitted from the decision. *Masco* aside, the Federal Circuit court looks to the law of the regional

circuit court to answer questions regarding the application of collateral estoppel in patent cases. *RF Del., Inc., v. Pac. Keystone Techs., Inc.*, 326 F.3d 1255, 1261 (Fed. Cir. 2003). In the Fifth Circuit, the general rule with respect to the application of collateral estoppel under these circumstances mirrors the *Masco* approach that “once an appellate court has affirmed on one ground and passed over another, preclusion does not attach to the ground omitted from its decision.” *Winters v. Diamond Shamrock Chem. Co.*, 149 F.3d 387, 394 (5th Cir. 1998) (quoting *Dow Chem. v. U.S. E.P.A.*, 832 F.2d 319, 323 (5th Cir. 1987)). Thus, the general rule in both circuits is when an appellate court has affirmed on one ground and disregarded others, that collateral estoppel does not apply to those issues disregarded by the appellate court. Plaintiffs attempt to carve out two exceptions to this general rule, each of which will be addressed separately, below.

(b) Waiver

First, Plaintiffs contend that Collins waived its right to appeal the Virginia court’s construction of the remaining claim terms by failing to properly present them to the appellate court in the context of the doctrine of equivalents infringement theory. See *Collins*, 216 F.3d at 1049 (noting that Collins did not present such a theory to the court on appeal). Plaintiffs maintain that Collins’s alleged waiver had the effect of rendering the Virginia court’s construction of these terms final and that the Virginia court’s final judgment precludes further litigation of the remaining terms.

True, the Federal Circuit did note that Collins’ challenging of the claim construction issues alone did “not suffice to present on appeal the issue of summary judgment regarding infringement under the doctrine of equivalents.” *Collins*, 216 F.3d at 1049. But Plaintiffs have failed to supply the Court with any authority that this procedural misstep constitutes an intentional waiver by Collins of its right to appeal these claim construction rulings. In the absence of any legal or factual support

for Plaintiffs' position, the Court is not inclined to find that Collins waived his right to appeal.

(c) "Defensive"/"Offensive" Collateral Estoppel

Plaintiffs' second argument for circumventing the general rule of collateral estoppel described above is that this case is distinguishable from the other Fifth Circuit cases applying that rule because those "all involve[] the *offensive* use of collateral estoppel, whereas this case involves *defensive* use of the doctrine." (Pls.' Post-Hrg Br. at 6) (emphasis added). Plaintiffs maintain that cases involving the defensive use of collateral estoppel do not require review by an appellate court of the issue to be precluded. (*Id.*). Hence, Plaintiffs reason that the Federal Court's decision not to review the Virginia district court's other claim construction rulings does not prevent the application of collateral estoppel to those rulings. The Court is not persuaded. Plaintiffs cite no relevant Fifth or Federal Circuit authority that squares with their assertion that the defensive use of collateral estoppel operates differently as a matter of course with respect to disregarded appellate issues than when the doctrine is used offensively. Moreover, the Court's own review of the relevant authority reveals nothing to dictate such an approach.

A case instructive on this topic is *Parklane Hosiery Co. v. Shore*, where the Supreme Court addressed the dichotomy between the offensive and defensive uses of the doctrine:

[O]ffensive use of collateral estoppel occurs when the plaintiff seeks to foreclose the defendant from litigating an issue the defendant has previously litigated unsuccessfully in an action with another party. Defensive use occurs when a defendant seeks to prevent a plaintiff from asserting a claim the plaintiff has previously litigated and lost against another defendant.

439 U.S. 322, 326 (1979). The high Court recognized a stronger potential for unfairness from the operation of offensive collateral estoppel than defensive and thus directed that district courts be given "broad discretion to determine when ...[offensive collateral estoppel] should be applied." *Id.*

at 331. Exercising this broad discretion, the Court noted, may in some cases require a stronger showing that the prior opportunity to litigate was adequate before the offensive use of collateral estoppel will be permitted. *Id.* at 331 n.16. Nonetheless, the Supreme Court also recognized a “distinct trend” in “recent authority” finding “no intrinsic difference” between offensive and defensive collateral estoppel. *Id.* (quoting RESTATEMENT (SECOND) OF JUDGMENTS, §88(2) cmt. d, at 99). As the Federal Circuit observed, “while it is true that ‘a stronger showing that the prior opportunity to litigate was adequate may be required’ for offensive collateral estoppel than for defensive collateral estoppel...the basic inquiry is the same: whether the party to be estopped had a full and fair opportunity to litigate the issue in question.” *Dana v. E. S. Originals, Inc.*, 342 F.3d 1320, 1324 (Fed. Cir. 2003) (citing RESTATEMENT (SECOND) OF JUDGMENTS, § 29(1982)).

In sum, although a greater potential for unfairness attends the application of offensive collateral estoppel than defensive, courts have been given broad discretion in permitting its use. Beyond this basic distinction, however, application of offensive or defensive collateral estoppel is a fact specific inquiry driven by considerations of fairness. Plaintiffs have not cited any authority to support their broad assertion that “defensive collateral estoppel does not require an appellate review of the issue to be precluded,” and the Court has found none. Nor has the Court discovered any other basis in law upon which to depart from the general rule that collateral estoppel does not apply to disregarded appellate issues. For these reasons, the Court rejects Plaintiffs’ argument that those issues decided by the Virginia court that were disregarded by the Federal Circuit court are barred from consideration by this Court under the doctrine of defensive collateral estoppel.

B. Stare Decisis

1. Legal Standard

Plaintiffs next attempt to foreclose Collins from re-litigating the claim terms at issue in this case under the doctrine of *stare decisis*. The principle of *stare decisis* is defined in Black's Law Dictionary as: "[t]he doctrine of precedent, under which it is necessary for a court to follow earlier judicial decisions when the same points arise again in litigation." BLACK'S LAW DICTIONARY 1414 (7th ed. 1999). Here, Plaintiffs seek to bind this Court to the claim construction rulings of the Virginia court.³

A longstanding doctrine of our jurisprudence is that a court is bound to follow precedent established by a court "superior to it." Evan H. Caminker, *Why Must Inferior Courts Obey Superior Court Precedents?*, 46 STAN. L. REV. 817, 818 (1994) (citing 1B James Wm. Moore, Jo Desha Lucas & Thomas S. Currier, MOORE'S FEDERAL PRACTICE ¶ 0.401, at 1-2 (2d ed. 1993)). This is known as the principle of "vertical *stare decisis*." See Michael Abramowitz and Maxwell Stearns, *Defining Dicta*, 57 STAN. L. REV. 953, 1094 n. 10 (2005). The force of horizontal *stare decisis*, the duty to follow the decisions of judges of coordinate jurisdiction, is not as strong. *Id.* In general, federal district courts do not follow precedents of other district courts, including those in the same district. *Id.* (citing Amy Coney Barrett, *Stare Decisis and Due Process*, 74 COLO. L. REV. 1011, 1015 (2003)) (citations omitted). This has generally been the practice of district courts presiding over claim construction issues where other district courts have considered and ruled on identical or similar

³ As mentioned previously, the parties agree that the Federal Circuit's subsequent review and ruling on the term "TST switch" is binding in this case; thus, the issue at hand is whether *stare decisis* principles weigh in favor of this Court adopting the Virginia court's claim construction rulings.

issues. *Verizon Cal., Inc. v. Ronald Katz Tech. Licencing, L.P.*, 326 F. Supp. 2d 1060, 1069 (C. D. Cal. 2003) (citing *Texas Instruments, Inc., v. Linear Technologies Corp.*, 182 F. Supp. 2d 580, 589 (E.D. Tex. 2002)). At least some courts, however, have observed that when the prior district court's ruling addresses the "identical or similar issues of claim construction, [the decision of the prior court] *can* be viewed as persuasive and highly relevant, rather than binding authority." *Verizon*, 326 F. Supp. 2d at 1069 (citing *Texas Instruments, Inc.*, 326 F. Supp. 2d at 589-90)) (emphasis added). Other federal courts have declined to apply any deference to prior district court claim construction rulings, even as to identical claim terms. See *Lectrolarm Custom Servs., Inc., v. Vicon Indus., Inc.*, 2005 WL 2177000, at *3 (W.D. Tenn. September 2, 2005) (slip copy) (stating "Intrajurisdictional uniformity in claim interpretation is an important goal of the patent system that is achieved through review of federal district courts' claim construction orders in a single *appellate* court.") (emphasis added).

2. Analysis

Although horizontal *stare decisis* as applied to claim construction determinations carries little force, this Court recognizes the value of uniformity and predictability in this area of patent jurisprudence. In *Markman*, the Supreme Court did not expressly address the issue of horizontal *stare decisis* with respect to claim construction decisions, but nevertheless noted the importance of "uniformity in the treatment of a given patent..." and the need to avoid "a zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims [which] would discourage invention only a little less than the unequivocal foreclosure of the field..." 517 U.S. at 390. The Court further touted the advantage of uniformity within districts which it predicted would result from treating claim construction as a legal determination to be made by judges in that it would result in the application of *stare decisis* on those question not yet decided by the Federal Circuit. In

sum, the doctrine of *stare decisis* does not compel this Court to adopt the claim construction determinations of the Virginia court. Plaintiffs concede as much, arguing instead that the doctrine *counsels* against overturning the Virginia court's claim determinations. (Pls.' Post-Hrg Br. at 7)(emphasis added).

The Court agrees that there are several factors that militate in favor of deferring to the Virginia court's claim construction rulings. First, Collins was the plaintiff in the Virginia case and had a full opportunity to litigate the same core claim construction issues he now seeks to rehash before this Court. Second, Nortel was a defendant in the Virginia case and is now being required to litigate some of the identical claim construction issues ostensibly settled over six years ago in *Collins I* and thereafter relied upon by that company. Further, the remaining Plaintiffs, SBC and Fujitsu, not parties to *Collins I*, strongly urge the Court to defer to the Virginia court's rulings, a fact which distinguishes this case from cases where courts declined to adopt a prior court's claim construction rulings because of the inequity to defendants not involved in the prior case. See, e.g., *Lamps Plus v. Dolan*, No. 3:01-CV-1537-K, 2003 WL 22435702, at *2 (N.D. Tex. August 26, 2003) (Kinkeade, J) (citing *Texas Instruments v. Linear Tech. Corp.*, 182 F. Supp.2d 580 589-90 (E.D. Tex. 2002)). Finally, and most significantly, having reviewed the intrinsic record as well as the all of the briefing and having heard the arguments at the full-day *Markman* hearing, the Court finds the Virginia district court's claim interpretations to be legally correct and based upon sound principles of claim construction. For these reasons, and the reasons discussed below, while the Court understands it is not bound by the Virginia court's rulings, the Court agrees with those claim construction determinations.

II. Claim Construction

A. Legal Standard

Claim construction is the first step in the two-part analysis to determine patent infringement. *Vitronics Corp v. Conceptronic, Inc.*, 90 F.3d 1576, 1581-82 (5th Cir. 1996). Each claim is first construed in order to determine their true meaning and scope. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995). Then, the properly construed claims are compared against the device accused of infringing. *Id.*

Claim construction is simply a way of elaborating the normally terse claim language in order to understand and explain, but not to change, the scope of the claims. *Embrex, Inc. v. Serv. Eng'g Corp.*, 216 F.3d 1343, 1347 (Fed. Cir. 2000). The analysis begins with the language of the claim itself. *Vitronics*, 90 F.3d at 1582. Absent an express intent to impart a novel meaning, terms in a claim are to be given their ordinary and accustomed meaning. *Mars, Inc. v. H.J. Heinz Co.*, 377 F.3d 1369, 1373 (Fed. Cir. 2004); *Vitronics*, 90 F.3d at 1582. A patentee, however, may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history. *Vitronics*, 90 F.3d at 1582. Thus, it is always necessary to review the specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning. *Id.* Furthermore, the words of the claim must be construed in light of the specification, which contains a written description of the invention that must be clear and complete enough to enable those of ordinary skill in the art to make and use it. *Id.* The specification is always highly relevant and the single best guide to the meaning of a disputed term. *Id.*

The Court may also consider the prosecution history of the patent. *Id.* The prosecution

history contains the complete record of all the proceedings before the Patent and Trademark Office (the “PTO”), including any express representations made by the applicant regarding the scope of the claims. *Id.*

When construing claims, the Court must look first to the claim language, the specification, and the prosecution history, known collectively as the “intrinsic evidence,” because the intrinsic evidence constitutes the public record of the patentee’s claim. *Id.* at 1583. Competitors are entitled to rely on this record and on the established rules of claim construction to ascertain the scope of the patent and thus design around the claimed inventions. *Id.*

Intrinsic evidence alone will resolve any ambiguity in most situations. *Id.* Extrinsic evidence, such as expert testimony regarding the meaning or scope of technical terms, is disfavored. *See id.* Extrinsic evidence should not be relied upon if the public record unambiguously describes the scope of the patented invention. *Id.* These principles of claim construction were recently reaffirmed by the Federal Circuit sitting en banc in *Phillips v. AWH Corporation*, 415 F.3d 1303, 1311-1324 (Fed. Cir. 2005)(en banc). With these claim construction principles in mind, the Court turns to the rulings of the Virginia court.

B. Analysis

The ‘589 patent “claims a structure that dynamically switches selected communications channels at a network node while allowing unselected channels to bypass the node.”⁴ The ‘907 patent “claims a structure that synchronizes communications within a network.”⁵ As mentioned

⁴ *Arthur A. Collins, Inc. v. Northern Telecom, Ltd.*, 216 F.3d 1042, 1043 (Fed. Cir. 2000).

⁵ *Id.*

previously, the Virginia court entered claim construction rulings with respect to the following terms:

- “TST switch;”
- “connected” and “connectable;”
- “bypass;”
- “control store;”
- “means for measuring;”
- “unified structure;” and
- “direction of the timing adjustment interval.”

See generally, Collins I.

The parties agree that they are bound by the Federal Circuit’s construction of “TST switch.” Therefore the Court will turn to the remaining claims construed by the Virginia court but disregarded by the Federal Circuit Court.

1. “Connected” and “Connectable”

(a) The Virginia Court’s Claim Construction

Perhaps most pivotal to the outcome of this case is this Court’s construction of the terms “connected” and “connectable.” More to the point, at the center of the debate between the parties over many of the key claim terms is whether “connected” and “connectable” mean *directly* connected or whether these terms extend to configurations that contain intermediate circuitry. The Virginia court also recognized the significance of these terms to that case in its April 6, 1999 opinion when the court observed:

These terms [“connected” and “connectable”] are critical because the patents disclose switching networks and the skeletal system of both networks are devices that are “connected” to each other. Without a clear definition of “connected” or “connectable”, a fact-finder would be unable to determine whether an accused device infringes either literally or under the doctrine of equivalents.

Collins v. Nortel, No. 98-380-A, slip op. at 5-6 (E.D. Va. February 2, 1999) (emphasis added). The court proceeded to demonstrate the numerous places within the claims themselves that the terms

“connected” and “connectable” appear:

The ‘589 patent claims:

- 1) “a control store *connected* to said bypass,” Col. 11, ln. 35,
- 2) “said inlet line terminating units *connected* to receive selected channels from said transmission media,” Col. 11 ln. 44- Col. 12, ln. 2, and
- 3) “said inlet ports of said TST switch being *connected* to randomly receive channels from said inlet line terminating units,” Col. 12, lns. 14-15.

The ‘907 patent discloses:

- 1) “a plurality of digital switching units each *connectable* to said transmission media,” Col. 11 lns. 29-30,
- 2) “a first line terminating unit *connected* to receive said channels of data from said high speed transmission media,” Col. 12, lns. 1-3,
- 3) “a TST switch *connected* to receive said channels of data from the outlet ports of said TST switch,” Col. 12, lns. 4-6, and
- 4) “a second line terminating unit *connected* to receive said channels of data from the outlet ports [of] said TST switch,” Col 12, lns. 7-9.

Id.

Next, in framing the issue in dispute, the Virginia court stated:

Plaintiff [Collins] argues that the terms “connected” and “connectable” do not require a direct immediate connection, but rather that these terms also apply when intermediate circuitry is placed between the two connected devices. For example, Collins claims that its patents extend to configurations in which intermediate circuitry may exist between the TST switch and the line terminating units. “The fact that intervening equipment may be present in that connection is irrelevant.” Pl. *Markman* Mem. at 29. Plaintiff relies on the “common practice in telecommunications engineering, and, indeed, in everyday language, to speak, for example, of party A to a telephone call as being ‘connected’ to party B, even though there is a lot of intervening equipment between party A and party B involved in that connection.”

...

Nortel, on the other hand, argues that the terms “connected” and “connectable” refer to direct, uninterrupted connections. Nortel rejects Collins’s argument that “intervening equipment may be placed between the various claim elements recited as being ‘connected’” Def. *Markman* Br. at 25. “[A]ccording to Collins’s interpretation, discrete structural claim components that are required to be

‘connected’ and that operate with respect to the same ‘channels of data’ could be thousands of miles apart, such as in the example Collins gives of Bob, in San Francisco, calling Mary, in Washington, D.C.” *Id.* Nortel contends that Collins’s loose definition of “connected” and “connectable” are not disclosed in the patents-in-suit and extend the patented inventions far beyond the literal scope of the patent claims.

Id. at 6-7.

Then, relying upon settled principles of claim construction, the Virginia court engaged in the following analysis:

In *Markman*, the Supreme Court held that “a term can be defined only in a way that comports with the instrument as a whole,” and that the task of claim construction demands preservation of “the patent’s internal coherence.” *Markman*, 517 U.S. at 389, 390. Thus, at the outset, if we are to preserve the coherence of these two related patents, we must construe “connected” and “connectable” consistently, applying the same rule of construction to both terms whenever they appear in the claims. Furthermore, claims cannot be construed any “broader than the supporting disclosure.” *The Gentry Gallery, Inc. v. The Berkline Corp.*, 134 F.3d 1473, 1480 (Fed. Cir. 1998). Indeed, “in a given case, the scope of the right to exclude may be limited by a narrow disclosure.” *Id.* at 1479. A patentee cannot “disclose and claim an invention narrowly and then, in the course of an infringement suit, argue effectively that the claims should be construed to cover that which is neither described nor enabled in the patent.” *North Am. Vaccine Inc. v. American Cyanamid Co.*, 7 F.3d 1571, 1577 (Fed. Cir. 1993).

The patents-in-suit disclose extremely complex and intricate digital switching networks. Given the technical precision with which the inventor describes these devices, we read these patents as teaching narrow and exact claims. Figure 3, the only embodiment of the patents’ primary invention, depicts, for example, second line terminating units that are directly connected to the outlet memories. There is no intermediate circuitry and nothing in the patent to suggest that the patent was meant to cover devices where a second line terminating unit could be “connected” to an outlet memory through one or more undisclosed pieces of equipment. Second, as Nortel points out, the Federal circuit has “considered the claim limitation ‘connected to’ in the context of a surgical instrument known as a linear cutter stapler and concluded that a definition of ‘connected to’ that included intermediate elements would render this claim term ‘meaninglessly empty.’” *Def. Markman Br.* at 25, citing *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 93 F.3d 1572 (Fed. Cir. 1996).

Plaintiff’s claim construction is further flawed because it proposes no meaningful

limitation on the patented invention. In today's Internet-dominated environment, every piece of communications equipment is theoretically, if not actually, "connected to" or "connectable" to every other piece of equipment. If the components of Collins's invention can be "connected" to each other even though there is an infinite number of intermediate devices between, then Collins has invented nothing. A patent without meaningful limits is invalid on its face. Furthermore, as we previously held with respect to time-space-time switching, the patents-in-suit disclose a structure, not a function. After all, the function of every switch is to get something from point A to point B. What these patents disclose is a specific system for achieving the switching result. In doing so, they teach a particular structural arrangement of various components in a particular configuration. They do not disclose a "suggested" way of hooking up the equipment, but rather a configuration with certain distinct and immediate connections that the inventor envisioned.

Id. at 8-9.

The Virginia court concluded, "We hold that when the patents-in-suit use the terms "connected" and "connectable" they disclose components that are directly connected or connectable to each other, with no intermediate device or circuitry between them..." *Id.* at 9.

In the instant case, filed over six years after *Collins I*, the debate over the meaning of these two terms is unchanged. Plaintiffs (including Nortel, defendant in the Virginia case) urge that the terms disclose a device in which the components are "directly joined to one another within the same unitary piece of equipment without any intervening equipment." (Pls.' Post-Hrg. Br. at 19). Whereas Collins (plaintiff in the Virginia case) continues to cling to a definition that describes a device in which the components are "link[ed] together with or without something intervening to perform a desired function." (Rev. Prop. Cl. Const. Stmt., Att.) Plaintiffs' argument here not only replicates Nortel's in *Collins I*, it closely parallels the Virginia court's reasoning on the issue. (*Markman* Hrg. Tr. at 71). For the reasons discussed below, the Court agrees with Plaintiffs and the Virginia court on the construction of the terms "connected" and "connectable."

(b) This Court's Claim Construction

The Virginia court initially looked at the claim language to review the terms in the context of the claims in which they appeared. In conducting claim construction, “the analytical focus must begin and remain centered on the language of the claims themselves.” *Interactive Gift Express v. Compuserve, Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001). “A claim must be read in accordance with the precepts of English grammar.” *In re Hyatt*, 708 F.2d 712, 714 (Fed. Cir. 1983). In other words, the grammatical arrangement of words in a sentence, the “syntax” of the claim language, must be examined to properly interpret a claim term. *Eastman Kodak Co. v. Goodyear Tire & Rubber*, 114 F.3d 1547, 1553 (Fed. Cir. 1997). As persuasively argued by Plaintiffs in their *Markman* briefing, “[t]he syntax of the claims requires certain specific connections illustrated and described in the specification...the language expressly requires that each of the above connections be within the same ‘dynamically reconfigured TST switching system.’ ” (Pls.’ Post-Hrg. Br. at 10) (citing to patents: ‘907, 11:24-12:12; ‘589, 11:27-31, 11:35-38, 11:42-12:5, 12:15-23). As Plaintiffs’ counsel plainly stated at the *Markman* hearing, relying on the syntax of the claim terms in urging a *direct* connection interpretation, “...at the end of the day, essentially everything [all components] is connected to everything else.” (*Markman* Hrg. Tr. at 64). Viewing the terms as they are placed throughout the sentences of the claims, and reading them consistently supports Plaintiffs’ and the Virginia court’s conclusion that the terms refer to a *direct* connection. To read them otherwise, with infinite possibilities of devices with intervening equipment, would, as the Virginia court concluded, describe no invention at all.

The Virginia court next examined the terms in the context of the “instrument as a whole” to preserve the patents’ “internal coherence.” This settled method of claim construction was

endorsed again recently by the Federal Circuit in *Phillips*, 415 F.3d at 1313 (claim terms must be read in the “context of the entire patent...”). The Virginia court ultimately chose a narrower construction of the terms than sought by Collins, in part because the court found Collins’s proposed construction so broad that it had no “meaningful limits” and rendering the patents “invalid on [their] face.” This method of analysis also comports with long held patent construction principles. Even where there are two plausible meanings for a challenged claim term and there is an enabling disclosure that supports the narrower interpretation, “the court should adopt the narrower meaning in order to promote the public notice function performed by the claims.” *The Interpretation of Patent Claims*, 32 AIPLA Q.J. 1, at 46 n. 187 (Winter 2004) (citing *Athletic Alternatives, Inc. v. Prince Mfg.*, 73 F.3d 1573, 1581 (Fed. Cir. 1996)). Here the language of the specification as well as Figure 3 contained therein support the narrow interpretation of these claim terms proposed by Nortel in *Collins I* and Plaintiffs in this case.

The Court finds that the Virginia court’s decision to reject Collins’s claim interpretation of these terms, partly relying upon the potential that Collins’s construction would render the patents invalid, is grounded in well-worn claim construction principles. Where “claims are amenable to more than one construction, they should when reasonably possible be interpreted so as to preserve their validity.” *Modine Mfg., v. U.S. Int’l Trade Comm’n*, 75 F.3d 1545, 1557 (Fed. Cir. 1998). While this principle has been not been endorsed as a regular component of claim construction by the Federal Circuit, that court has held that claims may be construed so as to preserve their validity under the limited circumstances where the proposed construction “is ‘practicable’ ...based on sound claim construction principles, and does not revise or ignore the explicit language of the claims.” *Phillips*, 415 F.3d at 1327 (quoting *Generation II Orthonics, Inc. v. Med. Tech. Inc.*, 263 F.3d 1356, 1365 (Fed.

Cir. 1988)). Here, for all of the reasons stated, the Court finds that the Virginia court's construction of the terms "connected" and "connectable" is in solid accord with both the intrinsic record and applicable claim construction principles. Further, it in no way revises or ignores the express claim language. The broad definition proposed by Collins both in this case and in *Collins I*, was accurately described by the Virginia court, as providing "no meaningful limitation on the patented invention." Adopting the Plaintiffs' construction (also Nortel's in *Collins I*) will preserve the patents' validity. In conclusion, the Court concurs with the Virginia court's claim interpretation of the terms "connected" and "connectable."

Accordingly, the Court construes the terms "connected" and "connectable" to mean "directly joined to one another within the same unitary piece of equipment without any intervening equipment."⁶

2. "Unified Structure"

(a) The Virginia Court's Construction of the Term

The term "unified structure" does not appear in the claims of either the '589 nor the '907 patent, but is contained in the patent summary portion of the specifications for both. The Virginia court construed the phrase in connection with the '589 patent because a core dispute between Nortel and Collins was whether the patent disclosed a "unified structure." Because that same dispute - whether the invention is comprised of components connected in a manner that constitutes a "unified structure" - lies at the heart of this case, the Court will address the term "unified structure." In

⁶ The addition of the term "within the same unitary piece of equipment" derives from the Virginia court's construction of the term "unified structure", addressed next.

analyzing the term “unified structure”, the Virginia court made the following determination:

Nortel argues that the 589 requires a unified multiplexing and TST switching structure with a common “control store” “connected to the bypass.”... Collins argues that the 589 does not require a “unified” structure....Neither side explains what they mean by “unified”, however the standard dictionary meaning for “unify” is “to make into one unit, consolidate.” See WEBSTER’S II NEW RIVERSIDE UNIVERSITY DICTIONARY at 1261 (1994). Therefore a unified system would be a consolidated one. The patent summary does refer to one aspect of the invention being a high speed digital switch which comprises “a unified multiplexing and switching structure.” Col. 3 lns. 13-15. In describing the advantages of the invention the patent states that “channels are assigned as trunk groups under common channel control. Virtual multipoint connections are used for the common control channels. Block mode control messages transmitted to switches via common control channels are processed by a microprocessor that updates control shares and completes simple local switching functions.” Col 9, lns. 47-53....

Lastly, the noun “synchronization” comes from the verb “synchronize” which means “to take place at the same time; to operate in unison; to cause to operate with exact coincidence in time or rate.” See WEBSTER’S II NEW RIVERSIDE UNIVERSITY DICTIONARY at 1173 (1994). In describing the invention Collins states “the synchronization system is an important feature... .” Col. 8, lns. 8-9.

Collins argues that the patent should not be limited by words not used in its claims. We reject this view because it is obvious from the language used in the patent and the description of the way the invention is supposed to work that it must be unified and that some common control structure is necessary to achieve the synchronization that is at the core of the invention.

Collins v. Nortel, No. 98-380-A, slip op. at 19-20 (E.D. Va. February 2, 1999).

For the reasons below, this Court is persuaded that this construction correctly captures what was intended by language “unified structure.”

(b) This Court’s Construction of the Term

The Virginia court relied in part on language in the specification to conclude that the ‘589 Patent comprised a “unified structure.” The specification is “the single best guide to the meaning of a disputed term.” *Vitronics*, 90 F.3d at 1582. Here, the specification language relied upon by the

court, “common channel control”, “common control channels” and “synchronization”, signaled to the court that the invention was comprised of a unified structure with a common control structure and that the common control structure was necessary to achieve the core synchronization function. This analysis not only accords with basic principles of English grammar, it also comports with settled claim construction principles which endorse primary reliance upon the specification. The claims of a patent are “directed to the invention that is described in the specification; they do not have meaning removed from the context from which they arose.” *Phillips*, 415 F.3d at 1316 (citing *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 389 (1996)).

The Virginia court also relied upon the dictionary definitions of “unify” and “synchronize” in ascertaining the meaning of “unified structure.” Dictionary definitions may be relied upon to aid the court in understanding the technology so long as the definition supplied by the dictionary does not contradict the patent documents themselves. *Phillips*, 415 F.3d at 1322-23 (citing *Vitronics*, 90 F.3d at 1584 n.6). The definitions of the terms “unify” or “synchronize” used here do not contradict any documents in the intrinsic record, and thus may be relied on to aid the Court’s construction of the term “unified structure.” Finally, the Virginia Court’s analysis and conclusion regarding “connected” and “connectable” further supports Plaintiffs’ argument that the inventor contemplated a unified structure with the components directly connected to each other. The Court therefore, recognizing that this term, although not a claim term, is essential to the core dispute, defines “unified structure” as “a consolidated structure with all components directly connected to one another.”

3. “Bypass”

(a) The Virginia Court’s Claim Construction

The parties’ dispute over the term “bypass” boils down to whether it means that data

channels in the bypass go completely *around* the TST switch (Plaintiffs' view) or whether the channels may also go *through* the switch (Collins's position).

The Virginia court found as follows on this issue:

This term appears in dependant claim 2 of the '907 and is an element in the '589. Although the two patents use slightly different words to describe this element, both use the same figure 3 to show the same loop bypass 36 and provide the same description of how it works. In addition the prosecution history of the '589 makes it explicitly clear that Nortel's proposed construction is correct. That construction provides that when data is in the bypass loop 36 that data completely goes around and in no respect goes through the TST switch. This construction is fully consistent with Collins statement in both patents, that one advantage of his bypass feature is that smaller TST switches can be used in the invention because not all of the data will pass through every switch.

Collins v. Nortel, No. 98-380-A, slip op. at 18.

(b) This Court's Claim Construction

At the outset, the Court notes that this particular dispute merits scant attention because the ordinary meaning of the term "bypass", viewed in the context of the written description and the prosecution history, handily dictates the result. To properly interpret a claim term from the perspective of a person of ordinary skill in the art, "we must look at the ordinary meaning in the context of the written description and the prosecution history." *V-Formation, Inc. v. Benetton Group SPA*, 401 F.3d 1307, 1310 (Fed. Cir. 2005). The specifications in both the '589 and '907 patents are replete with references to the term "bypass" which suggest only one reasonable interpretation. For example, the following sentence, contained in the invention summary portion of the '589 patent, suggests "bypass" means to go around the switch: "[s]elected channels can be 'dropped/inserted' without disturbing other channels which *bypass* the switch." '589 Col. 3 lns. 20-22. Similarly, the '907 patent contains the following language: "The loop bypass 36 allows data circulating on a loop

to completely *bypass* a switching node for which the data is not intended.” ‘907 Col 6 lns. 67-68, Col. 7 ln. 1. Moreover, in the prosecution history of the ‘589 Patent, Collins states, “[t]he loop bypass allows data circulating on a loop to completely *bypass* a switching node for which the data is not intended.” (Pls.’ *Markman* Br., App. at 490, U.S. Reexamination App. No. 90/079, 252, Am. And Pet. For Ext.). The Virginia court indicated correctly that the fact that the data must go around and not through the switch was one of the benefits Collins touted about his invention. In claim interpretation, courts must determine “what the inventors actually invented...” *Phillips*, 415 F.3d at 1316.

There are occasions where “the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of commonly understood words.” *Phillips*, 415 F.3d at 1314 (citing *Brown v. 3M*, 265 F.3d 139, 1352 (Fed. Cir. 2001)). As noted in Plaintiffs’ *Markman* briefing, “[t]he term ‘bypass,’ when used as a noun, ordinarily means ‘a passage to one side.’...When used as a verb, ‘bypass’ means ‘to avoid by means of a bypass.’” (Pls’ *Markman* Br. at 17 (quoting Merriam Webster’s Collegiate Dictionary, 10th ed. (1996), at 157 (A362))). Plaintiffs stress the obvious. And one hardly need consult a dictionary to determine the ordinary meaning of the term “bypass.” This is particularly so given the manner the term is used in the claims themselves.

For the foregoing reasons, the Court finds the Virginia court’s and Plaintiffs’ proposed claim construction to be correct and therefore construes the term “bypass” to mean “a structure and path by which data channels completely go around and in no respect go through the TST switch.”

4. “Control Store”

(a) The Virginia Court’s Claim Construction

The bulk of the dispute over the proper construction of “control store” rests upon whether the device is a unitary structure. Plaintiffs’ counsel summed it up at *Markman* hearing by stating, “[t]he significance of the control store limitation is that it goes to this issue of whether or not the device is a unitary device.” (*Markman* Hrg. Tr. at 175). An additional related dispute is whether the control store contains only memory or a memory, processor and software.

The Virginia court addressed the issue as follows:

The abstract of the ‘589 describes the control store as performing three functions. Those functions are described in claim 1 as specifically, “responding to commands received through said control channels” for performing three different functions: 1) “dynamically allocating active ones of [the] selected channels to respective inlet ports of [the] TST switch”; 2) “dynamically allocating received channels of [the] selected channels to the outlet ports”; and 3) “routing the data from [the] active ones of the selected channels through [the] TST switch to a selected one of the outlet ports wherein [the] data for [the] active selected channel is returned to [the] transmission line.” Col. 12, lns. 23-34.

The control stores, pictured as 25, 26 and 27 in figure 3, are further described in the detailed description as identifying “which space switc[h] crosspoints are selected and which inlet and outlet memory port locations are accessed during each switch time slot, with the control stores being accessed in cyclical fashion so that each connection is repeated, at the same time, during every frame.” Col. 6, lns. 2-9.

According to Collins in its Memorandum concerning *Markman* interpretation, the difference between its construction of the language and Nortel’s appears to be that Collins views the control store as merely controlling the bypass for receiving the channels whereas Nortel argues that the control store actually receives the channels. The parties also appear to dispute whether the control store routes data to the TST switch (Collins’s construction) or through the TST switch, (Nortel’s view).

Because the language says the control store is connected to the bypass for receiving a variable number of channels, one of which is a control channel (Col. 11, lns. 35-40) we conclude that the control store does receive the channels. We also find that the patent clearly requires that the control store routes the data from the channels sent

to the inlet ports through the TST switch to the designated active outlet ports to then be returned to the transmission medium. We conclude from this language, as well as from figure 3, that the '589 must be read as a system in which the "control store, bypass, TST switch and transmission media are integrally related, both in terms of connectivity and functionality." Moreover, that one of the functions of the control store(s) (26) is to route data through the TST switch. This reading makes logical sense because the whole point of the bypass is to switch data around the TST switch. For that data which is not to bypass the TST switch, there must be a mechanism for routing it through the TST switch. The control store appears to be that mechanism.

Collins v. Nortel, No. 98-380-A, slip op. at 20-23.

(a) This Court's Claim Construction

The Virginia court wisely relied upon the language of the claims themselves and the specifications to glean the proper construction of the term "control store." Part of the basis for that court's determination was its conclusion that the device is a unitary structure. For the reasons stated previously regarding "connected", "connectable" and "unitary structure", this Court concurs in that conclusion. The Court finds the Virginia court's construction of the term "control store" and the analysis behind it sound and adopts it as the construction of this Court. Accordingly, this Court construes the term "control store" as follows: "A control store is included within a single unified DRST switching unit that includes a memory, processor, and operating software that determines (1) which data circulating on the network loop is to be selected and diverted to the TST switch of a given switching node; (2) how that data passes through the TST switch; (3) which data is output from the TST switch back onto the network loop; and (4) which data is to bypass the TST switch of that node."

5. "Means for Measuring"

(a) The Virginia Court's Claim Construction

The term "means for measuring at least one timing adjustment interval" is contained in Claim

1 of the '907 Patent. Claim 4 of the '907 Patent requires "means for measuring the duration of at least one timing adjustment interval." The dispute over this terminology boils down to whether the phrase "means for measuring" is even capable of construction given that the term is not specified in the claims or described anywhere in the specification. Plaintiffs argue that it cannot be construed because it is not clearly linked to a corresponding structure in the specification. Collins disagrees.

The Virginia court found that the term did not lend itself to interpretation, observing:

The means for measuring is not specified in the claims, nor is it anywhere described in the narrative portion of the patent. Neither Nortel nor Collins can point to any language that explains how the measuring is done. As Nortel and Collins both point out, the closest specification found is a description of how to control the timing interval. The means for controlling is described as "a variable rate precision fractional oscillator or programmable fractional divider associated with each (input and output) LTU 32 and 34." Once a measurement is made, however that is done, it is clear from the patent that the receiving switch from its first (input) LTU sends back to the second (output) LTU of the sending switch, the control command to make the time adjustment. This language necessarily implies that the LTU's are not self-adjusting, but must rely on commands from a source outside themselves to make these interval adjustments.

Collins v. Nortel, No. 98-380-A, Feb. 2, 1999, slip op. at 17.

(b) This Court's Claim Construction

The Court agrees with the Virginia court and Plaintiffs that the term "means for measuring" cannot be construed. Plaintiffs cite a persuasive Federal Circuit case, *Medical Instrumentation and Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1210-11 (Fed. Cir. 2003), in support of their position. In that case, the Federal Circuit, facing a similar issue regarding a claim limitation written in means-plus function-form recited the following instructive claim construction principles:

Section 112, paragraph 6 provides: An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure... in support thereof, and such claim shall be construed to cover the corresponding structure... described in the specification and equivalents thereof. 35 U.S.C. § 112¶6 (2000). The first step in the construction of a means-plus-function

claim element is to identify the particular claimed function. *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999). The second step in the analysis is to look to the specification and identify the corresponding structure for that function. *Id.* Under this second step, structure disclosed in the specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim. *B. Braun Med. Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997)...

The duty of a patentee to clearly link or associate structure with the claimed function is the quid pro quo for allowing the patentee to express the claim in terms of function under section 112, paragraph 6. *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1377 (Fed. Cir. 2001). Section 112, paragraph 6 was intended to allow the use of means expressions in patent claims without requiring the patentee to recite in the claims all possible structures that could be used as means in the claimed apparatus. *O.I. Corp. v. Tekmar Co.*, 115 F.3d 1576, 1583 (Fed. Cir. 1997). However, “[t]he price that must be paid for use of that convenience is limitation of the claim to the means specified in the written description and equivalents thereof.” *Id.* If the specification is not clear as to the structure that the patentee intends to correspond to the claimed function, then the patentee has not paid that price but is rather attempting to claim in functional terms unbounded by any reference to structure in the specification. Such is impermissible under the statute.

Id.

Despite Collins’s protests to the contrary, there is no clear link or association between the “means for measuring” function in either Claims 1 or 4 and a corresponding structure described in the specification. Collins’s argument that the means for measuring refers to the “fractional divider or its equivalents” along with its “variable modulus counter and the received control command, specifying the parameters of the timing adjustment interval” does not pass muster, as both the Virginia court and Plaintiffs recognize, because the function recited with respect to the fractional divider describes a *control* as opposed to a *measuring* function. (‘907 Patent, Col 8 lns. 26-39). For all of these reasons, the Court agrees with the Virginia court and finds that the term “means for measuring” is not capable of construction.

6. “Direction of the Timing Adjustment Interval”

(a) The Virginia Court’s Claim Construction

With regard to the phrase “direction of the timing adjustment interval”, the parties take issue with the *direction* of the timing adjustment control commands. Specifically, Claim 1 of the ‘907 Patent addresses the manner in which the channels of data are received at the first line terminating unit from the other switching unit and the corresponding transmission of a control command to the other switching unit.⁷ Plaintiffs maintain that the control command travels in a opposite direction from the channels of data based on the “[p]lain language of Claims 1 through 3 in the ‘907 patent.” (*Markman*. Hrg. Tr. at 258). Collins disagrees and contends that the control command is transmitted in a forward direction - opposed to an opposite direction - from the flow of the data channels. The Virginia court found the language disclosed a “feedback configuration” in which the control command traveled in the opposite direction from the data channels, reasoning as follows:

The ‘907 requires a feedback configuration in which a switching unit in the system which is receiving data from a sending switching unit is able to measure “at least one timing adjustment interval within frames” of the channels of data received at the receiving switch’s first (input) LTU and then is able to send back (feedback) to the sending switch a control command to “adjust the rate of its counter as a function of the measured timing adjustment interval which interval must be maintained within a predetermined range.” More specifically, it is the counter in the receiving switch’s (input) first LTU that provides the feedback signal to a divider in the sending switch’s (output) second LTU.

Collins v. Nortel, No. 98-380-A, Feb. 2, 1999, slip op. at 16.

(b) This Court’s Claim Construction

The Court finds the Virginia court’s interpretation of the term “direction of the timing

⁷ The dispute over this claim language covers terminology in Claims 1 and 4 of the ‘907 Patent. The Court has elected to address the dispute with respect to Claim 1 only.

adjustment interval” reasonable based upon language contained in the specification and in the claims themselves. The specification for the ‘907 Patent, as pointed out by Plaintiffs at the *Markman* hearing, repeatedly uses the terms “feedback” and “return” in connection with its discussion of the configuration of the switching system. Some examples include:

Each LTU 32 further includes a receiver and transmitter used in connection with the *feedback* signal to provide an input to the elastic buffer for synchronization...

‘907 Patent, Col. 7:65-67(emphasis added)

...The following connections are made through the matrix: (1) bypass the port, (2) connect the port inlet and outlet in series with the loop, (3) cross the bi-directional loop for transfer of ACW timing adjustment codes *returned* from a receiving node to a sending node, (4) loop-back connection for cable testing. The cross-connect function (3) is not used when unidirectional cables are not placed in the same duct, the address decoding function of the sequential decoder/encoder is used instead to *return* timing adjustment signals to the selected node.

Id., Col:43-53. (emphasis added).

The term “feedback” has been defined as “the return of information about a system or process that may effect a change in the process.” *Agere Sys., Inc., v. Broadcom Corp.*, No. Civ. A 03-3138, 2004 WL 1658530 at *4 (E.D. Pa. July 20, 2004)(quoting ACADEMIC PRESS DICTIONARY OF SCIENCE AND TECHNOLOGY 812 (Christopher Morris ed., 1992)). As discussed previously, the Court is mindful of the problems posed by placing undue reliance upon dictionary definitions. However, even after *Phillips*, the Federal Circuit continues to permit reliance upon dictionaries as long as the dictionary definition in question does not contradict the intrinsic record.

Here, the Court finds that the definition comports with language used in the specification and supports Plaintiffs’ and the Virginia court’s view that the control command travels in an opposite direction to the data channels to serve a feedback function that drives the valuable synchronization

process. This configuration is further supported by Figure 5 in the '907 specification which depicts bidirectional arrows with respect to this process. Finally, the express language of Claim 1 of the '907 patent further bolsters Plaintiffs' view. In describing the timing adjustment interval, Claim 1 provides: "means for measuring at least one timing adjustment interval within frames of said channels of data RECEIVED at said first line terminating unit FROM said other switching unit, and for TRANSMITTING a control command TO said other switching unit." The syntax of this sentence can only mean that the same switching unit both receives the channels of data and sends the control command which, in turn, signifies a bi-directional flow pattern.

For these reasons, the Court agrees with Plaintiffs and the Virginia court on the proper construction of the "direction of the timing adjustment interval" and, accordingly, construes it as follows: "The timing adjustment control command signal is fed in a reverse direction from the data signal; that is, from a downstream digital switching unit to an upstream digital switching unit, in a direction opposite the data flow."

III. Conclusion

For the reasons set out, the court construes the claims of the '589 and '907 patents as follows:

- (1) "connected and connectable" – These terms mean "directly joined to one another within the same unitary piece of equipment without any intervening equipment."
- (2) "unified structure" – Although not a claim term, the Court defines "unified structure" to mean "a consolidated structure with all components directly connected to one another."
- (3) "bypass" – "Bypass" means "a structure and path by which data channels completely go around and in no respect go through the TST switch."
- (4) "control store" – "A 'control store' is included within a single unified DRST switching


unit that includes a memory, processor, and operating software that determines (1) which data circulating on the network loop is to be selected and diverted to the TST switch of a given switching node; (2) how that data passes through the TST switch; (3) which data is output from the TST switch back onto the network loop; and (4) which data is to bypass the TST switch of that node.”

- (5) “means for measuring” – The Court finds that this term is not capable of construction.
- (6) “direction of the timing adjustment interval” – This term means “[t]he timing adjustment control command signal is fed in a reverse direction from the data signal; that is, from a downstream digital switching unit to an upstream digital switching unit, in a direction opposite the data flow.”

All relief not expressly granted herein is otherwise **DENIED**.

SO ORDERED.

SIGNED October 14th, 2005



JANE J. BOYLE
UNITED STATES DISTRICT JUDGE